



Figure 2.21: Dynamics and transformations of nitrogen in a stream ecosystem. Nutrient cycling from one form to another occurs with changes in nutrient inputs, as well as temperature and oxygen available.

Nutrients Across the Stream Corridor

Both nitrogen and phosphorus are delivered to surface waters at an elevated rate as a result of human activities, including point source discharges of treated wastewater and nonpoint sources, such as agriculture and urban development. In many developed watersheds, a major source of nutrients

is the direct discharge of treated waste from wastewater treatment plants, as well as combined sewer overflows (CSOs). Such point source discharges are regulated under the National Pollutant Discharge Elimination System (NPDES) and usually are well characterized by monitoring. The NPDES requires permitted dischargers to meet